

U.S. Appln. No. 09/604,285 - GATTO et al.

### REMARKS

Applicants respectfully request reconsideration and allowance of their reissue application.

The Examiner requested Applicants to supply a list of claims pursuant to 37 C.F.R. 1.121(b). Office Action, page 9. To comply with the Examiners' request, and in an effort to be consistent with what appears to be the directive in MPEP 1453, 37 C.F.R. §1.121(i) and §1.173, all reissue claims are presented with underlining. Brackets or strike outs to show amendments to pending but 'new' reissue claims do not appear to be required according to MPEP 1453 and Rule 173.

#### The claims, including the amended claims

Upon entry of this Amendment, claims 22, 23, 25-40, 42-52 and 56-80 will be presented for examination.

The claims are supported by the original specification and there is no new matter.

Reissue claims 22 and 23 remain pending. Amended claim 22 and amended claim 23 are presented in accordance with 37 C.F.R. 1.173 and MPEP 1453 and recite an amount of molybdenum in accordance with the original specification (ppm molybdenum based on the weight of the lubricating composition) to obviate the objection based on new matter. Attention is respectfully directed to column 5, lines 60-63 ("based on the weight of said lubricating composition"). The Examiners are also respectfully invited to page 23 herein wherein claims 22 and 23 are discussed further. Claims 22 and 23 recite that the oil soluble molybdenum compound is free of phosphorus and free of active sulfur and the comments in the Office Action at pages 5-6 about substantially free of active sulfur are not germane to these claims. Claims 22 and 23 recite ratios of components in accord with the original specification and attention is invited, for instance, to column 6, lines 47-56. Amended claim 22 recites "said oil soluble molybdenum compound and said secondary diarylamine are

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present in an effective antioxidant amount" to replace the expression "said oil soluble molybdenum compound is present in an amount to be effective as an antioxidant." The amended expression finds basis in the original specification throughout, including the Examples, such as Example 5.

Applicants respectfully call attention to claim 24 having been canceled in a prior amendment. The Examiners have rejected this previously canceled claim in the pending Office Action at pages 2, 3, 4, 8 and 9. It is respectfully requested that the PTO records be updated.

Claims 25-40 and 42-51 are included in the listed claims as a courtesy so as to provide the Examiners with one set of claims for their review. It is thought that such previously submitted 'new' reissue claims are supported in Applicants' original specification throughout, including passages cited in prior submissions. Attention is respectfully invited to the reissue oath.

Amended claim 52 recites sulfur-free and phosphorus-free and that the composition is adapted for lubricating an internal combustion engine. The amendment finds support throughout the original specification and attention is invited, for instance, to the support for claims 22-23 and to columns 14-15.

Claims 54-55 were previously canceled and that status is reflected in the listed reissue claims.

Claims 56-63 are included in the listed claims as a courtesy so as to provide the Examiners with one set of claims for their review. It is thought that such previously submitted 'new' reissue claims are supported in Applicants' original specification throughout, including the Examples. Attention is respectfully invited, for instance, to columns 14-15 and the Table V in column 15 in conjunction with the summary of the invention. However, claim 61 has been amended to recite "wherein said oil soluble

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molybdenum compound provides 468 ppm molybdenum" instead of "less than about 468 ppm." Attention is also again respectfully invited to Table V. Applicants additionally, separately address these claims elsewhere in this Amendment.

New claim 64 finds basis in the original specification throughout. The oil soluble molybdenum compound is a molybdenum carboxylate and is therefore in accord with the original, surrendered patent grant. The secondary diarylamine compound comprises an alkylated diphenyl amine compound and attention is directed to columns 5-6 and also, for instance, to column 14, penultimate line. The amount of molybdenum provided by the molybdenum compound finds support in the original specification, such as the Summary of the Invention when taken with Table V, and attention is directed to column 5, lines 60-63 ("based on the weight of said lubricating composition"). The specification provides basis for the range of about 104 ppm to 468 ppm molybdenum as seen from Example 5 and ex parte Jackson, 110 U.S.P.Q. (BNA) 561, 562 (Bd.App. 1956) (ranges recited in claims based on examples). The ratio of the molybdenum to the parts by weight of the secondary diarylamine compound finds support in the original specification at column 6, lines 47-56.

New claim 65 finds support in the original specification and Table V and column 15, lines 50-52.

New claim 66 finds support in the original specification in column 15, Table V.

New claim 67 finds support in the original specification throughout and attention is invited, for instance, to column 7, lines 36-51.

New claim 68 finds support in the original specification throughout and attention is invited, for instance, to column 4, last several lines to column 5, line 48 and the Examples.

New claim 69 finds support in the original specification throughout and attention is invited, for instance, to column 5, lines 54-56, among other passages.

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New claim 70 finds support in the original specification throughout and attention is invited, for instance, to column 5, lines 58-59, among other passages.

New claim 71 finds support in the original specification throughout and attention is invited, for instance, to column 2 and column 6.

New claim 72 finds support in the original specification throughout and attention is invited, for instance, to column 6, lines 12-21 from the end.

New claim 73 finds support in the original specification throughout and attention is invited, for instance, to column 6, lines 12-21 from the end.

New claim 74 finds support in the original specification throughout and attention is invited, for instance, to columns 14-15 and to Example 7 at column 16. Example 7 discloses lubricating an internal combustion engine with a composition that is in accord with claim 64.

New claim 75 finds support in the original specification throughout and attention is invited, for instance, to columns 14-15 and to Example 7 at columns 16. Example 7 discloses an internal combustion engine lubricated with a composition that is in accord with claim 64.

New claim 76 finds support in the original specification throughout. The lubricating composition recites an antioxidant combination. The antioxidant combination finds support in the specification throughout. The Examiner will appreciate the reference to the antioxidant mixture of components disclosed at column 8, lines 51-52 ("[t]he molybdenum/diaryl amine based antioxidant mixture ..."). The amount of secondary diaryl amine finds support in the original specification throughout and is consistent with the claims of Applicants' original, now surrendered original patent grant. The amount of molybdenum

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from the oil soluble molybdenum compound is defined according to a ratio disclosed at column 6, lines 47-56. The recitation of at least about 100 ppm of molybdenum finds support throughout the specification inasmuch as the original specification discloses from about 100 ppm and greater amounts and attention is invited, for instance, to column 15, including Table V, which discloses 104 ppm molybdenum.

Claim 77 defines the secondary diarylamine as consisting essentially of a secondary diphenyl amine and this finds support in the original specification throughout and is consistent with Applicants' original, now surrendered original patent grant. Attention is invited, for instance, to column 6.

Claim 78 defines the oil soluble molybdenum compound consistent with the original specification throughout and is consistent with Applicants' original, now surrendered patent grant. Attention is invited to columns 4 and 5.

Claims 79 and 80 find support in the original specification throughout and attention is invited, for instance, to column 6, lines 31-22 from the bottom.

**Obviousness-Type Double Patenting Rejection**

Applicants surrendered the original patent grant and therefore there is no basis for an obviousness-type double patenting rejection over the claims in U.S. Patent No. 5,650,381. Applicants respectfully suggest that this rejection should be withdrawn.

Applicants repeat their prior statement with respect to Re 37,363, namely a terminal disclaimer will be filed upon indication of otherwise allowable subject matter herein.

**The Office Action Relies on Mis-Described Cited Prior Art**

Applicants respectfully submit the alleged art-based rejections over a combination including the Thorsell reference, alleged admissions, and the de Vries et al. reference should be reconsidered and withdrawn because the Office Action relies on an articulated mis-

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understanding of the alleged prior art. See, e.g. *In re Hedges*, 228 U.S.P.Q. (BNA) 685, 686 (Fed. Cir. 1986) (reversing rejections, noting a "plain reading of Felix [reference] is contrary to the PTO position."); *In re Rosenberger*, 156 U.S.P.Q (BNA) 24, 26 (CCPA 1967).

The Office Action relies on a combination of cited references, including a reference to Louis de Vries et al., in rejecting certain claims but fundamentally mis-states what is actually described in the cited prior art. For instance, the Office Action alleges that "[t]he secondary reference, Louis de Vries et al., discloses 0.05 to 15% by weight ...[of] sulfur free containing molybdenum complexes in combination with 0.02 to 10 parts by wt. of an aromatic amine in a lubricant..." Office Action, page 7. *This is plain wrong.*

*In fact*, a plain reading of the cited art is contrary to the PTO position. The de Vries et al. reference specifically states in the Abstract "sulfur containing molybdenum compound." The cited art specifically requires "a sulfur containing molybdenum compound prepared by reacting an acidic molybdenum compound, a basic nitrogen compound and carbon disulfide." de Vries et al., column 1, lines 47-50. The de Vries et al. reference is elsewhere riddled with express teachings to use sulfur-containing molybdenum compounds, which implicitly means presence in substantial amounts, as seen, for example, from column 1, lines 55-66 as well as column 2, lines 1-3; column 2, lines 15-42; column 5, lines 41-46; column 8, lines 15-19; column 8, line 65 - column 9, line 23 (Example 1, 1.36% sulfur) column 9, line 24 to column 9, line 9 (Example 2, 3.75% sulfur); column 9, line 50 to column 10, line 5 (Example 3); column 10, lines 6-48 (reporting the use and testing of the sulfur-containing molybdenum complexes per Examples 1-3). The de Vries et al. reference uses carbon disulfide in the preparation of its required sulfur containing compounds and the disulfide means the sulfur is divalent - active sulfur.

*In fact*, contrary to the allegations in the Office Action, the cited de Vries et al. reference teaches away from the present inventions. See, e.g., *In re Hedges*, 228 U.S.P.Q. at 686-87 (reversing rejections, noting proceeding contrary to the accepted wisdom is strong evidence of unobviousness). According to the Examiners' cited art "[t]he oxidative stability

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of lubricating oils containing the combinations of this invention [de Vries et al.] are enhanced as compared to oil formulations not containing the additive combination." de Vries et al., column 10, lines 38-41. Since the de Vries et al. reference unambiguously requires the use of sulfur-containing molybdenum compounds, it is effectively the antithesis of the claimed inventions, and the antithesis to the Office Action (including the misstatement at page 7) and thus effectively rebuts the alleged prior art rejection over the combination of alleged references.

**The Claimed Inventions Would Have Been Unobvious**

- A. Claims 22-40, 42-52 and 56-63, define unobvious inventions over the improper combination of the Thorsell reference, an alleged admission, and the de Vries et al. reference.**

Applicants respectfully request the Examiners to reconsider and withdraw the rejection under 35 U.S.C. §103(a) over the Thorsell reference in combination with alleged admissions and in combination with the de Vries et al. reference.

First, there is no *prima facie* case for combining the references in the manner proposed in the Office Action. There must be a basis for combining the references, and even if combined, their teachings must be viewed as they would be viewed by a person of ordinary skill in the art. It is impermissible to pick and choose from any one reference only so much of it as will support a given rejection, to the exclusion of other parts necessary to give full appreciation of what such reference fairly suggests to one of ordinary skill in the art. See, e.g., In re Wesslau, 147 U.S.P.Q. (BNA) 391, 393 (CCPA 1965).

It is plain error to cite only 'sections of each reference' to support the rejection. The Office Action admits the Examiners have relied on selected portions of references: "[t]he sections of each references [sic] that have been relied upon ..." Office Action, page 17, line 14. The nature of the plain error is amply demonstrated. The de Vries et al. and/or Thorsell references express preference for a sulfur-containing compounds, such as sulfur-containing

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molybdenum compounds, which in their respective contexts suggests substantial amounts of sulfur. For instance, the de Vries et al. reference, discussed above, has no 'section' teaching sulfur-free molybdenum compounds in combination with a secondary diaryl amine. The cited references thus contradict the premises for the *prima facie* case alleged in the Office Action, as they effectively teach away from the present claimed inventions.

Second, contrary to the Office Action, the original specification at column 1, line 43 does not present any admission of obviousness. The Office Action fails to acknowledge the statement in the specification at column 1, lines 44-49 that: "[s]uch compositions include active sulfur or phosphorus as part of the molybdenum compound." It is instructive to see the inconsistency between the Office Action at page 5 and the specification at, for instance, column 1, lines 43-49, column 1, lines 54-59, column 1, line 64 to column 2, line 3. The inconsistency highlights the use of impermissible hindsight and the impermissible picking and choosing rejected by the court in the Wesslau case.

The Thorsell reference similarly teaches away from the claimed inventions. The Thorsell reference affirmatively teaches substantial amounts of active sulfur compounds, viz., copper dithiocarbamate.

This is the logical segue to the point that it is plain error to use the written description of *Applicants'* invention as prior art to vitiate the sulfur teachings in each of cited prior art references, including the Thorsell and de Vries et al. references. As the Federal Circuit has stated:

"To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction – an illogical and inappropriate process by which to determine patentability."

See, e.g., Sensorics, Inc. v. Aerosonic, 81 F.3d 1566 (Fed. Cir. 1996). That is precisely what has happened in the present case.



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Third, contrary to the Office Action, the Thorsell reference would not have suggested the secondary diarylamines recited in the present claims. Contrary to the Office Action, the reference has no disclosure of diarylamine or secondary diarylamines. It is legally and factually inappropriate to rely on a huge genus to assert obviousness against a species or sub-genus nowhere disclosed in the reference. See, e.g., In re Baird, 16 F.3d 380 (Fed. Cir. 1994) ("the fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that claimed compound obvious."); In re Jones, 958 F.2d 347 (Fed. Cir. 1992) (prior case law does not support the PTO's proposed rule that regardless of however broad, a disclosure of a chemical genus renders obvious any species that happens to fall within it). The Thorsell reference has a passing mention of "high molecular weight amines" at column 9, lines 33-34, apparently without explanation of what is "high molecular weight." Office Action nonetheless asserts the naked reference to "high molecular weight amines" would have suggested diarylamine or secondary diarylamine, or any species thereof.

Neither Examiner has supplied an affidavit or declaration to show where the Thorsell reference teaches what it does not disclose. Applicants requested such in the February 2003 Amendment.

Fourth, the Thorsell reference refers to a two-component system at column 6, line 46 *et seq.* The two-component system requires the substantial presence of phosphorus as seen from the column 7 description of the phosphorus containing "metal organophosphate," which effectively teaches against the present claimed inventions. The dithio carbamate mentioned in column 7, starting at line 47 similarly teaches away from Applicants' inventions and attention is respectfully invited, for instance, to the exemplary embodiments in claims 22, 23, 62, 63, 64, and 76. In such circumstances, even if, *arguendo*, the Office Action properly interpreted the Thorsell reference at column 9, which it does not, the resultant teaching still would not have suggested, taught, motivated or led a person of ordinary skill in the art to the present inventions.

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Fifth, the Thorsell reference would not have suggested an engine oil (e.g., a lubricating composition for an engine) according to the present inventions, nor would it have suggested a method for lubricating an engine comprising adding a lubricating composition according to claim 22, claim 23, claim 64 or claim 76 to the engine.

**B. The "Ritchie" reference would not have taught a lubricating composition containing an antioxidant mixture of two-essential components capability in which an oil soluble, sulfur-free and phosphorus-free molybdenum compound was present in an amount of at least 100 ppm.**

Applicants respectfully request reconsideration and withdrawal of the obviousness rejection of claims 22-40, 42-52, and 56-63 over the Ritchie et al. reference.

The Ritchie et al. reference, as discussed previously, would have suggested, taught, or motivated a person of ordinary skill in the art towards using a sulfur-containing copper compound, such as the sulfur compounds in the Thorsell reference, since the Ritchie et al. reference essentially denigrated the results obtained in their Example 7 (U.S. Patent No. 5,994,277 at column 13, corresponding to the cited "Ritchie" PCT publication).

The Ritchie et al. reference teaches away from the present invention. Ritchie et al. explicitly taught that using only an amine yielded double the improvement in comparison to using a combination of amine + molybdenum. This is clear from Table 1 at column 13 where using 0.3 mass % of an amine improved oxidation inhibition by 14 hours. In contrast, the Ritchie et al. reference teaches that combination of 0.3 mass % of the same amine with 40 ppm of a molybdenum compound decreased - undesirably reduced - the antioxidant inhibition by 50% to only an unsatisfactory 7 hours. Clearly, the data produced by Ritchie et al. suggest that combinations of amine + molybdenum, such as in test no. 7 in Table 1, would be unsatisfactory. The Examiners are directed to Applicants' claim 22, which recites "said oil soluble molybdenum compound and said secondary diaryl amine are present in an effective antioxidant amount," and to claims 23, 64, and 76, which suggest the present compositions will have about 100 ppm or more molybdenum, whereas in Example 7 in the

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Ritchie et al. reference suggests that a molybdenum compound alone or with an amine produces unacceptable results. *The Ritchie et al. reference would therefore have taught away from claims 22, 23, 64 and 76.*

Indeed, the Ritchie et al. reference suggested their three component system with effective amounts of a copper compound (e.g., effective antioxidant amounts of a mandatory antioxidant component) was the way to go. Indeed, the Ritchie et al. reference teaches a ratio of their required effective amount of one component (e.g. the oil-soluble *copper* compound) to another component (oil-soluble *molybdenum* compound, column 3, lines 49-51), which would not have suggested the amounts or ratios of the different components as recited in the present claims, and is another teaching that would have led persons of ordinary skill away from the present invention. In this regard, the Ritchie et al. reference incidentally taught a preference for only 5 to 50 ppm of the molybdenum compound (column 3, line 48), which would itself have led away from the present claimed inventions. See, e.g., In re Hedges, 228 U.S.P.Q. (BNA) at 687 (reversing rejection and pointing out “[Applicant] Hedges correctly points out that the references all suggest lower temperatures of reaction are preferable.”)

The Ritchie et al. reference also said their results with the three antioxidant components, including the required copper component, would not have been expected, which vitiates any foundation for the Examiners allegation of “routine experimentation” (Prior Office Action, page 8). The Examiners’ allegation of “routine experimentation” also violates 35 U.S.C. 103(a) (last sentence). See, e.g., In re Cormany, 407 F.2d 900 (CCPA 1969) (acknowledging allegations of routine experimentation are not adequate for an obviousness rejection); In re Tomlinson, 363 F.2d 328 (CCPA 1966) (arguments by Examiner and Board that it would be routine experimentation “simply...begs the question”); In re Fay, 347 F.2d 597 (CCPA 1965) (reversing rejection relying on routine experimentation, noting that the statute provides that patentability shall not be negated by the manner in which was made).

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The Ritchie et al. reference therefore would have effectively taught away from the present claimed invention.

**The new matter and written description rejections should be withdrawn.**

Applicants respectfully submit their original specification provides an enabling written description in satisfaction of 35 U.S.C. §112(¶1) whereby the "new matter" rejection under 35 U.S.C. §251 should be reconsidered and withdrawn. Applicants therefore respectfully request the Examiners to reconsider and withdraw the rejection of claims 22-23, 25-40, 42-52 and 56-63 under 35 U.S.C. §112(¶1) (Office Action, page 14 et seq.) and 35 U.S.C. §251 (Office Action, pages 9-14).

Contrary to the Office Action, the specification does, in fact, provide an enabling written description of the lubricating compositions, methods and products as claimed. The statute calls for a specification reasonably conveying to a person skilled in the art that inventors had possession of their inventions as later claimed. See, e.g., In re Edwards, 568 F.2d 1349, 1351-52 (CCPA 1978) ("to comply with the description requirement, it is not necessary that the application describe the claimed invention in *ipsis verbis*; all that is required is that it reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him.").

Applicants respectfully submit the Office Action reveals the errors by throwing up ephemeral 'conflicts' (pages 9 et seq.) when it is evident that the claim language in issue is precisely supported by the specification text quoted in the Office Action.

Contrary to the Office Action, the third full paragraph in the original specification at column 6 actually describes the exemplary amounts of secondary diarylamine (750 ppm to 5,000 ppm) and the fourth full paragraph in column 6 provides literal antecedent support for the ratio of molybdenum from the oil soluble molybdenum compound(s) to the diaryl amine compound(s).

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For instance, claim 22 recites a range of secondary diaryl amine (ppm) in a weight ratio to the molybdenum from the molybdenum compound consistent with Applicants' original specification.

Similarly, claim 23 recites a weight ratio of molybdenum to the secondary diaryl amine and a range in ppm for the molybdenum consistent with Applicants' original specification.

Applicants accordingly respectfully submit the dependent claims are freed from the objection under Section 112(¶1) and the allegation of new matter under Section 251 for reasons stated as to their respective independent claims.

Applicants acknowledge with appreciation the Examiners' suggestions as to claims 22 and 23. Amended claims 22 and 23 responds to the Examiners' concern and moots any objection. Amended claim 22 recites "said oil soluble molybdenum compound and said secondary diaryl amine are present in an effective antioxidant amount," which is consistent with the Examiners' reading of Applicants' original specification, including the Examples. Both amended claims 22 and 23 recite the weight ratio is with respect to the molybdenum and the secondary diaryl amine compound. It is respectfully submitted that these amendments reduce or eliminate an issue and are consistent with Applicants' original specification.

Contrary to the Office Action, the specification is not restricted to an exemplary range of about 100 ppm or 450 ppm molybdenum in the lubricating composition. For instance, at column 15, an oil soluble molybdenum compound is used in an amount greater than 100 ppm molybdenum based on the weight of the lubricating composition, and it is beyond cavil that the specification discloses amounts greater than about 104 ppm or 156 ppm since the specification elsewhere discloses up to about 450 ppm molybdenum and 468 ppm molybdenum. Thus, contrary to the Office Action, reciting about 104 ppm molybdenum (claim 59), reciting at least about 156 ppm molybdenum (claim 60), reciting

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104 ppm to 156 ppm molybdenum (claim 65), and reciting provides 468 ppm molybdenum (claim 61 and claim 66) are each supported in the original specification, including Table V at column 15.<sup>1</sup>

**Conclusion**

Applicants respectfully solicit reconsideration followed by favorable action. A terminal disclaimer as to Re 37,363 will be submitted upon indication that the other rejections have been (or are being) withdrawn. The claims define unobvious subject matter and are supported by the specification. If the Examiner has any questions, please contact the undersigned. Otherwise, a Notice of Allowance is earnestly, but respectfully, solicited.

Respectfully submitted,

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<sup>1</sup> In column 15, it is reported for Example 5 that the largest improvement in results can be obtained in a range of 104 pm to 156 ppm.